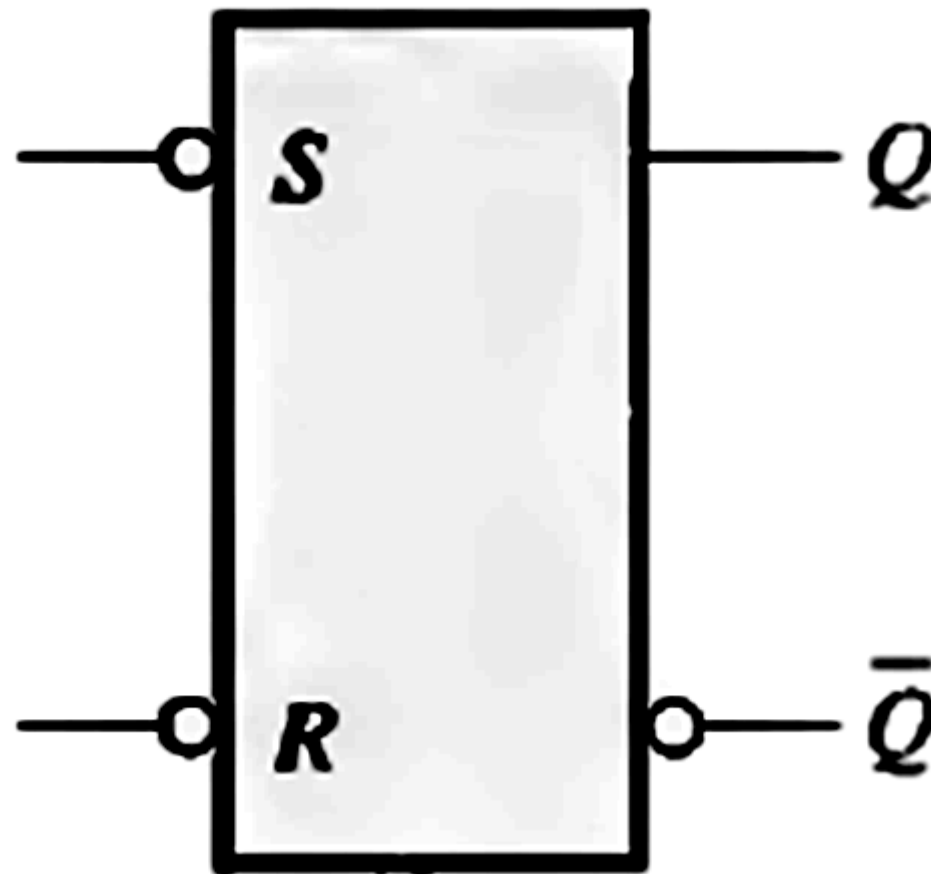
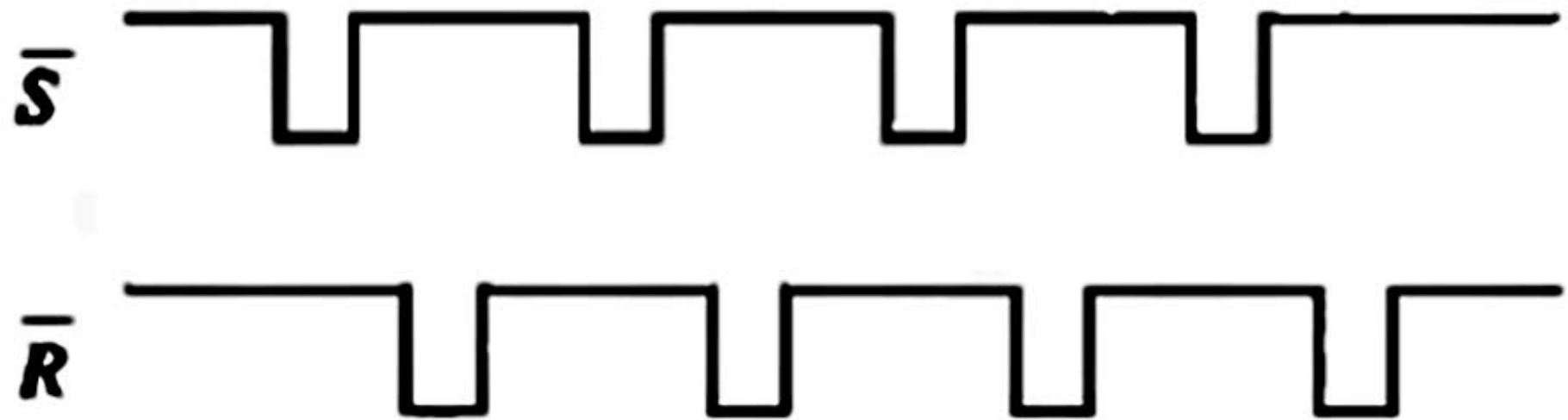
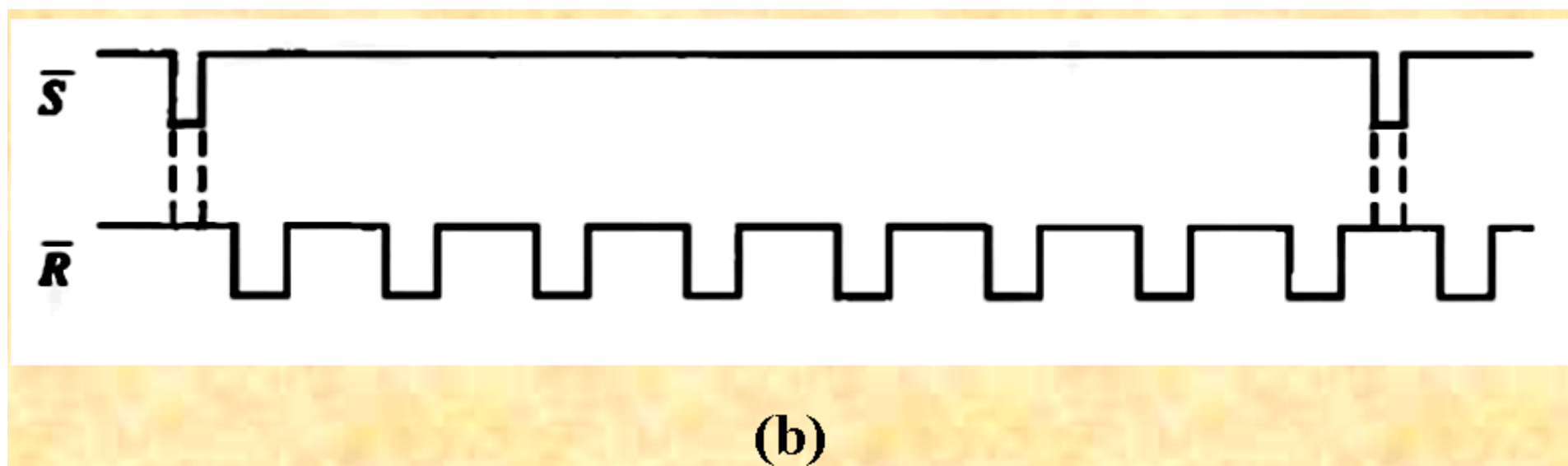


Q1: If the waveforms in Figure 1 are applied to an **active-LOW** input S-R latch, **draw** the resulting Q output waveform in relation to the inputs. **Assume** that Q starts **LOW**.

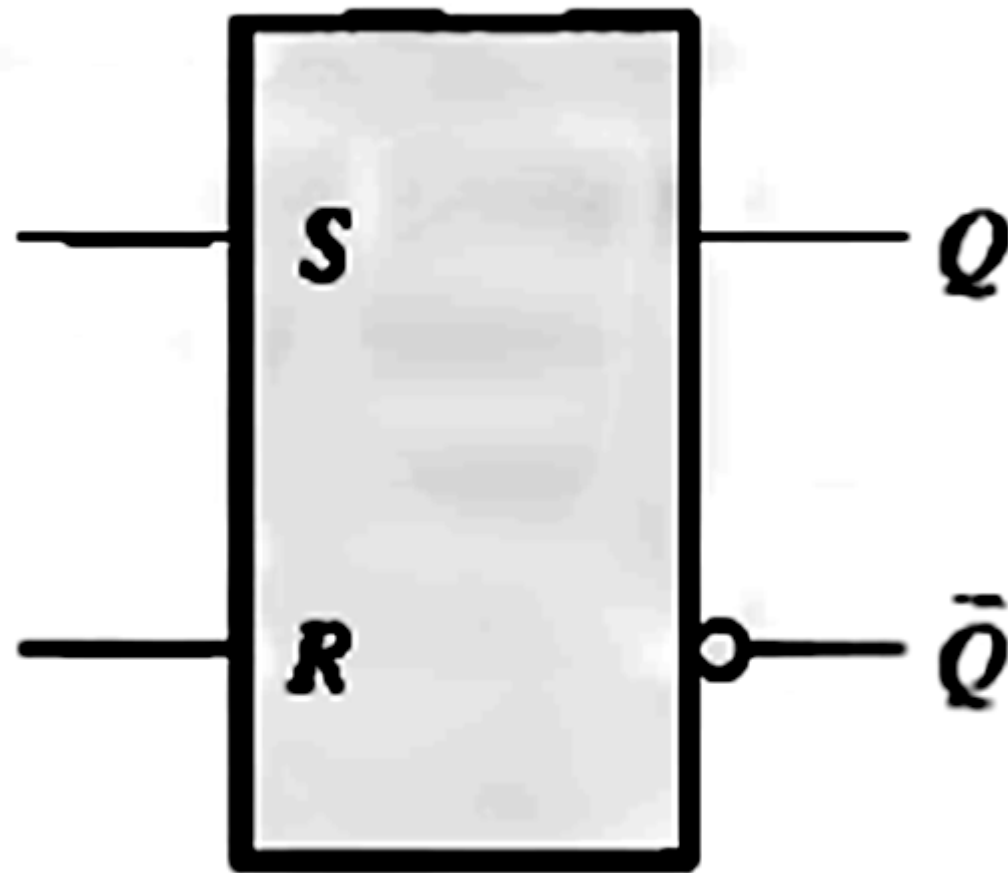


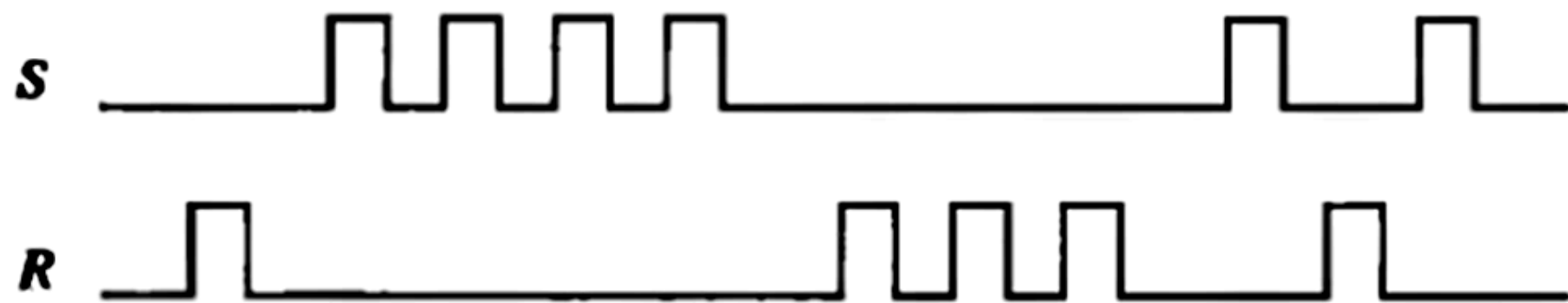


(a)

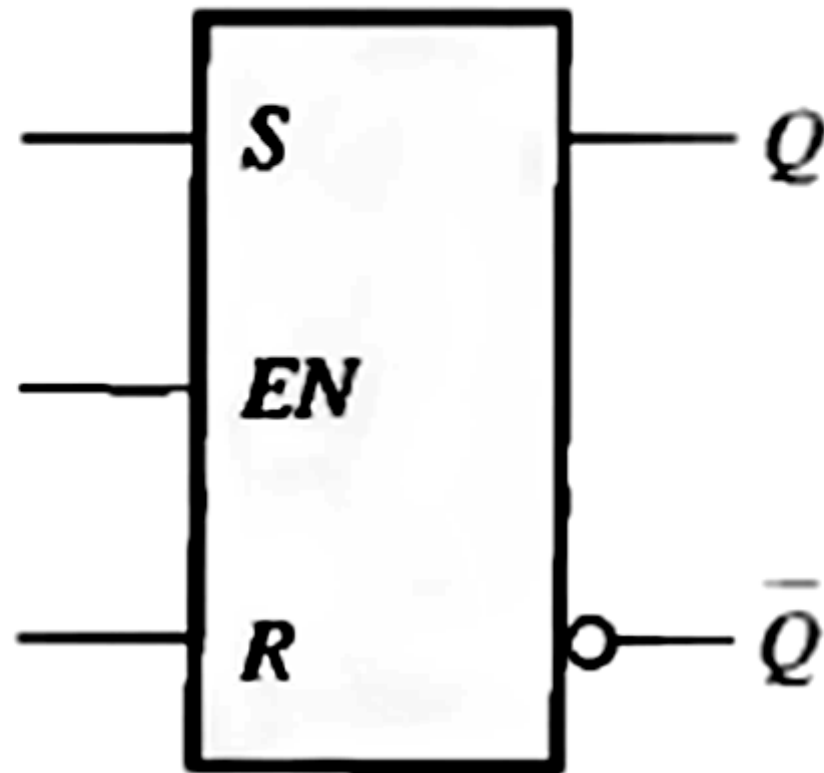


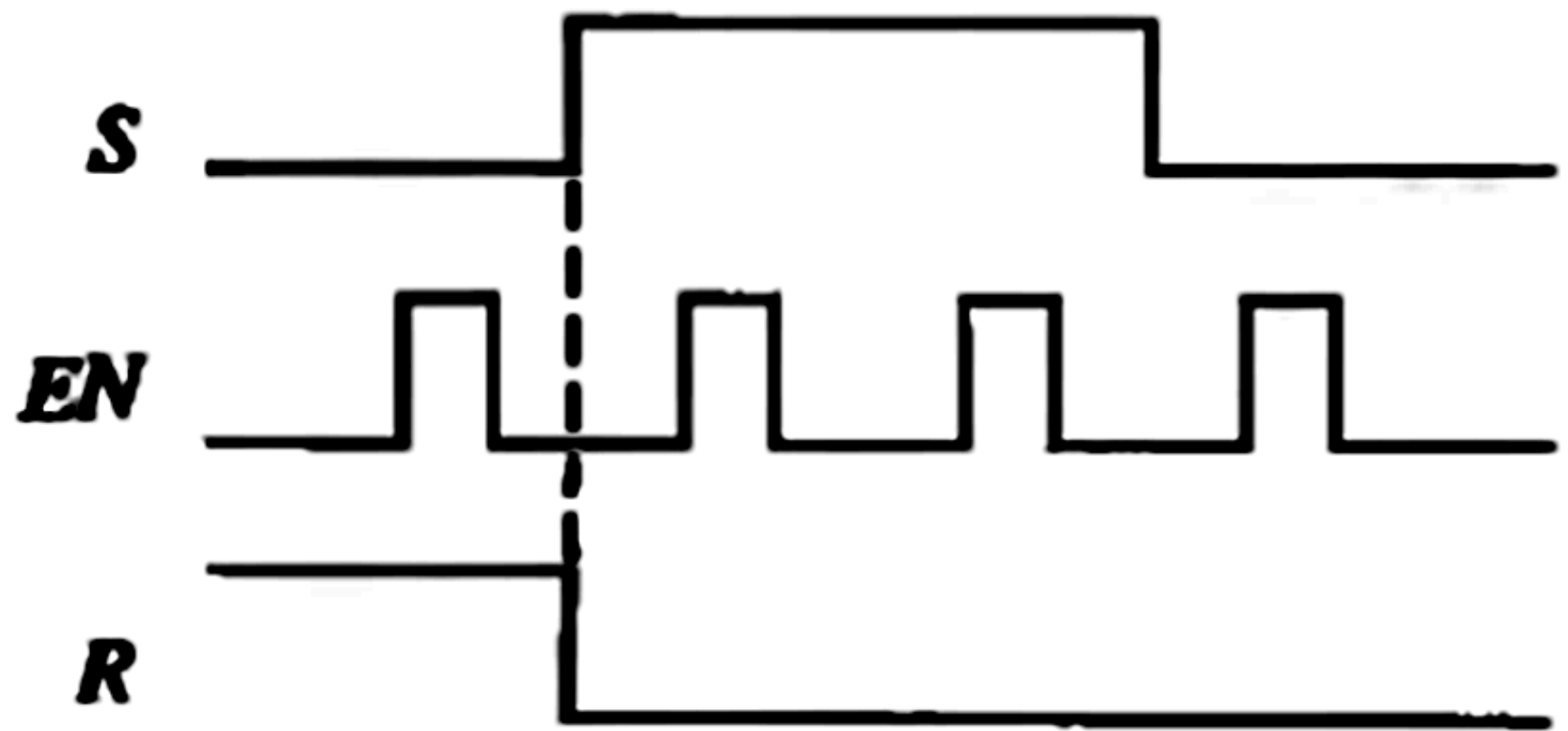
**Q2: If the waveforms in Figure 2 are applied to an active-High input S-R latch, draw the resulting Q output waveform in relation to the inputs. Assume that Q starts LOW.**





**Q3: For a gated S-R latch, determine the  $Q$  and  $\bar{Q}$  outputs for the inputs in Figure 3. Show them in proper relation to the enable input. Assume that  $Q$  starts LOW.**





**Q4: For a gated D latch. the waveforms shown in Figure 4 are observed on its inputs. Draw the timing diagram showing the output waveform you would expect to see at Q if the latch is initially RESET.**

